



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,567	09/12/2003	Kouji Saitou	12480-000021/US	5299

30593 7590 06/01/2007  
HARNESS, DICKEY & PIERCE, P.L.C.  
P.O. BOX 8910  
RESTON, VA 20195

EXAMINER
----------

HOLTON, STEVEN E

ART UNIT	PAPER NUMBER
----------	--------------

2629

MAIL DATE	DELIVERY MODE
-----------	---------------

06/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/660,567

Applicant(s)

SAITOU ET AL.

Examiner

Steven E. Holton

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office Action is made in response to applicant's amendment filed on 3/13/2007. Claims 1-3, and 6-13 are currently pending in the application. An action follows below:

#### ***Response to Arguments***

2. Applicant's arguments, see pages 8-10, filed 3/13/2007, with respect to the rejection(s) of claim(s) 1-11 under 35 USC 103(a) have been fully considered and are persuasive in light of the amendments to the claims. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made based on the amended language of claim 1, and further regarding the scope of dependent claim 2 based on the amendment of claim 1.

In remark, the Examiner agrees with the arguments that the voltage shifting of Noguchi is performed by applying a voltage to the common electrodes to shift the center level of the common electrodes to match the center level of the voltages applied to the source electrode. Noguchi is compensating to overcome parasitic capacitance effects of the switching element (col. 35, lines 22-32 and col. 37, line 58 – col. 38, line 10), but performs the compensation by applying the compensation voltage to the common electrodes. The Examiner interprets the amended claims to show that the optimum applied voltages are read from storage and then applied to the source electrode to shift the source electrode voltage and compensate for parasitic capacitance in the switching element of the pixel.

***Claim Objections***

3. Claims 3 and 10 are objected to because of the following informalities:

Regarding claim 3, the claim recites applying the optimum applied voltages to the source electrode to shift the source voltage electrode. This appears to already be taught in claim 1 and therefore, claim 3 merely restates much of the subject matter taught in claim 1.

Regarding claim 10, the claim includes a thin film transistor in each pixel and compensates for parasitic capacitance. The Examiner believes that the thin film transistor is a more detailed description of the 'switching element' recited in claim 1. The Examiner recommends amending claim 10, to provide statements such as, "the switching element in each pixel is a thin film transistor, each transistor having a source electrode... a gate electrode..." and maintain the remainder of claim 10 as providing further details about the switching elements and the source of the parasitic capacitance.

. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3, and 6-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase “each of which voltages is/may be applied to an electrode having a shiftable voltage waveform” fails to make the claim distinct. Specifically, the ‘is/may’ term allows for the possibility that an optimum applied voltage may be read out of the storage means but is not applied to either electrode voltage. By using the ‘may’ part of the term, optimum applied voltages can be ignored and not applied to electrodes of the display. The disclosure teaches that the optimum applied voltages are always applied to an electrode to match the center voltages of different voltage signals. This is to overcome a difference in the applied voltages and to reduce flicker in the display. Because all claims depend from claim 1, all other claims inherit the indistinct nature claim 1 and are also rejected.

Regarding claim 2, the amendments to claim 1, recite that the source electrode voltage is shifted to compensate for parasitic capacitance of the switching element of the display device. Claim 2 recites a similar but different invention wherein the voltage of the common electrode is shifted as part of the compensation. As shown in the arguments filed on 3/13/07, the optimum applied voltage is used to shift a voltage to

Art Unit: 2629

compensate for the parasitic capacitance. As stated in the response to arguments, the Examiner interprets the claims to read that the optimum applied voltage is applied to the source electrode to shift the source electrode voltage. Therefore, claim 2 teaches in opposition to the invention of claim 1 by applying the optimum applied voltages to the common electrodes instead of the source electrodes. Therefore, claim 2 is rejected as failing to distinctly point out the invention.

***Allowable Subject Matter***

5. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

The present invention is directed to a method of driving a transfective liquid crystal display device that can operate in a transmissive mode and a reflective mode. Independent claim 1 identifies the uniquely distinct features applying an optimum applied voltage to shift a source electrode voltage to match the center of a common electrode voltage to the source electrode voltage to compensate for parasitic capacitance of a pixel switching element. The closest prior art, Noguchi et al. (USPN: 7084849) and Yanagi et al. (USPN: 6784863) disclose methods of compensating parasitic capacitance by applying an offset voltage to a common electrode, or compensate parasitic capacitance when driving with different voltage polarities, either

singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven E. Holton whose telephone number is (571) 272-7903. The examiner can normally be reached on M-F 8:30-5.

Art Unit: 2629

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven E. Holton  
Division 2629  
May 24, 2007

AMR A. AWAD  
SUPERVISORY PATENT EXAMINER  
